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ABSTRACT

In 1986, the Center for Policy Research in Education began a 5-year study of the implementation and effects of state education reforms in six states chosen for their diverse approaches: Arizona, California, Florida, Georgia, Minnesota, and Pennsylvania. This issue contains material from an earlier CPRE report providing an interim assessment of 1980s reforms. Five conclusions may be drawn about state policy-making activity: (1) the highest level of state activity involved mandating more academic courses and changing teacher certification and compensation policies; (2) states tended to reject complex reform recommendations in favor of more manageable ones; (3) most state reform packages lacked coherence; (4) states exhibited no clear directional shift from the first reform wave to the second; and (5) economic expansion, although crucial to reform, was not the sole causal factor. There was little school district resistance to reforms increasing academic content. School districts carried out much of the restructuring agenda; some districts were actively using state policies to promote local priorities. States have been only modestly successful at achieving the educational goals expressed in "A Nation at Risk." The 1980s reform policies are first steps in a long-term process. CPRE recommends that schools find the best mix of state standard-setting and local creativity; match policies to problems; and coordinate reform policies. (11 references) (MLH)

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REPORTING ON ISSUES AND RESEARCH IN EDUCATION POLICY

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State Education Reform in the 1980s

More state activity aimed at improving public education took place in the 1980s than ever before. State legislators introduced an unsurpassed number of education-related bills, increased state aid, and examined the findings of hundreds of state-level task forces and commissions. Education initiatives spread quickly from state to state.

Analysts disagree about why state policy emerged as the bulwark in the present crisis in education. For sure, some of the impetus came from improved state policymaking capacities and expanding state tax bases. But were these weightier catalysts than the Reagan Administration's aversion to creating new federal programs, or the publication of *A Nation At Risk*? We don't know.

It's much more important to examine the significance of the reform movement itself. What were its goals? How much change did the new state policies really require? Were new initiatives translated into practice? Did they improve schooling? What future directions do they suggest?

To shed light on these questions, in 1986 the Center for Policy Research in Education (CPRE) began a five-year study of the implementation and effects of state education reforms in six states chosen for their diverse approaches to reform: Arizona, California, Florida, Georgia, Minnesota and Pennsylvania.

Some findings from the first three years of this research were published by CPRE in a report, *The Progress of Reform: An Appraisal of State Education Initiatives*, written by William A. Firestone, Susan H. Fuhrman and Michael W. Kirst. In writing the report, the authors relied to a great extent on research conducted by their colleagues on specific reform policies in the six states and others. They also drew from other reports and studies on the status of reform and from structured conversations with national association representatives and reform leaders in other states.

This issue of **CPRE Policy Briefs** contains material from the report which provides an interim assessment of the 1980s reforms.

State Policy Activity in Recent Reforms

Not since the formation of the common school system has the level of state policy activity in education been so high. Nearly every state joined in a national movement to address concerns expressed in 1983's *A Nation at Risk*. CPRE's tracking of education reform in six states, and more general observation of others, suggests five conclusions about this burst of state activity:

1. **The highest level of state activity was in mandating more academic courses and making changes in teacher certification and compensation policies.**

States across the nation made substantial efforts to give their students more academic content. Forty-five of the states either specified for the first time or increased the total number of credits required for high school graduation.

Student testing requirements have also gone up. Some states, like Pennsylvania, introduced state-wide mandatory testing for the first time; others, like Georgia and Florida, expanded existing programs. California moved instruction to a higher level by coordinating state-mandated tests, state textbook adoption, and curriculum standards.

But not all reforms of student standards suggested by *A Nation at Risk* were as popular as new graduation requirements and testing programs. The most striking example was the proposal to increase the number of days in the school year. Thirty-seven states considered

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such action but only nine actually followed through with it. Of that nine, none pushed the number of student days beyond 180 (Bennett 1988). Other recommendations that received relatively little consideration from the states involved lengthening the school day and changing homework policies.

The most pervasive policy changes with regard to the teaching force dealt with certification requirements and salaries. Entering the teaching profession is tougher than it used to be. Arizona, Florida, and California were among the 27 states that instituted a minimum grade-point average for entering teachers. All but four states required some kind of certification test. The proliferation of alternative routes to certification, however, may signal a smaller role for teacher colleges in educating prospective teachers. By 1986, 23 states had some alternative route to certification that allowed individuals with liberal arts backgrounds to go into teaching (Feistritzer 1986).

Along with revised certification requirements came changes in incentives. Teachers' salaries increased 22 percent in real terms between 1980 and 1988, with most of the growth occurring between 1983 and 1988 (Odden 1989). While not quite back to earlier higher levels, teachers' paychecks still grew faster than the average worker's (Darling-Hammond and Berry 1988).

Reforms aimed at changing the organization of instruction or altering decision-making practices within schools did not generally garner much support. Until very recently, when a number of districts and states undertook restructuring experiments, reformers out to professionalize teaching looked largely to merit pay and career ladders. In 1986, 18 states had or were planning such programs (Cornett 1986). Florida and Tennessee were among the few to implement them on a large scale. Florida later discontinued its merit pay program, and Tennessee's was radically modified. Some programs that continued, like California's mentor teacher program, were producing only minor changes in teachers' roles.

States that experimented with career ladders, began to do so more carefully, often through small pilot programs. Arizona, for example, began a career ladder program in only 15 of the state's more than 200 schools districts. Much of the initiative in this area has shifted from the state to the district level (Darling-Hammond and Berry 1988).

Throughout this reform period, equity concerns were overshadowed by the emphasis on higher standards. Generally speaking, states addressed equity issues in two ways. The first was by monitoring the effects of new standards on at-risk students, and concomitantly, improving and standardizing school dropout indicators. Second, states introduced programs specifically for at-risk students, including dropout prevention, coordinated social service, and early childhood programs.

By the mid-1980s, virtually all the states recognized the need for programs designed especially for the at-risk population. But by then the surge in education spending had slowed, forcing many states to resort to pilot efforts or small programs that left large numbers of potential beneficiaries unserved. Interest in broader equity concerns, though, remained high as the decade drew to an end. Nowhere was this more illustrated than in the restructuring movement, with its emphasis on improving teaching and learning for all students, enhancing the role of parents in their children's education, and transforming schools into collegial communities.

2. States tended to reject complicated reform recommendations in favor of more manageable ones.

State policies are difficult to implement when they are:

- Expensive;
- make a large quantitative addition to what already exists;
- complex, requiring new administrative arrangements, new technologies or inventions, or new behaviors from teachers and administrators; and/or
- redistributive, moving money, status, or authority from those in more advantaged positions to those in more disadvantaged positions (Firestone 1989).

The most popular state reform of the 1980s— increasing graduation requirements— didn't raise most of these problems. In fact, it was quite easy to implement. Rarely did districts incur direct costs by adding courses. The exception was when they needed to add specialized teachers. In many school districts, courses that became requirements were remarkably similar to courses that had been on the books before the proliferation of electives in the 1970s. Also, the new requirements often simply endorsed what teachers thought they should be teaching all along. And finally, although there was some reallocation of opportunities from vocational to academic teachers to accommodate changed course requirements, there was no major redistribution of teachers.

The ease with which graduation requirements were implemented is partially explained by their non-specific nature. States mandated additional years of subjects, such as mathematics or science, but did not specify what kind of math or science. With few exceptions, states did not simultaneously embark on strategies to upgrade academic content. As a consequence, most of the new courses were basic and general in nature (see sidebar on page 5).

Recommended reforms that were not adopted or were under-adopted tended to be less manageable. For example, lengthening the school day and year would have been expensive for states and districts to implement because they would have had to increase teachers' salaries to cover the extra time. Career ladder arrangements are full of obstacles. They are expensive because, to prevent the conflicts that differentiation could cause among staff, districts would have to raise salaries overall. Career ladders are also troublesome because creating fair and reliable assessment instruments strains existing technology. Finally, the introduction of neophyte and mentor teacher functions can lead to a major redistribution of authority among teachers and between teachers and administrators. States that ventured into these complex reforms often found they had to reconstruct their career ladder programs to make them more manageable.

3. Most state reform packages lacked coherence.

Reforms that are designed as coherent packages with mutually reinforcing parts have the greatest impact. Each part facilitates the other, and the entire package sends a coordinated message to local educators. As a rule,

though, the recent round of reforms lacked such coherence. The most common problem was not that specific provisions conflicted, but that they were often unrelated. This sent a barrage of signals to districts. District administrators were then forced to make complicated decisions about the allocation of time and money.

The most glaring example of actual conflict between different reform strategies occurred in the area of teacher policy. Many teaching reforms have been motivated by the need to improve both the quality and quantity of teachers. But some reforms, such as tougher certification requirements, could spur shortages. Similarly, depending on how they are implemented, policies that encourage alternative certification routes create more teachers but risk watering down their quality.

When there was coherence among separate reform measures, it was usually due to state leaders' efforts to integrate existing provisions around clearly defined goals. This was the case in California, where the state superintendent orchestrated the coordination of student testing requirements, state textbook selection, and state curriculum guides to stress higher-order cognitive thinking.

4. States were exhibiting no clear shift in direction from the first wave of reform to the second.

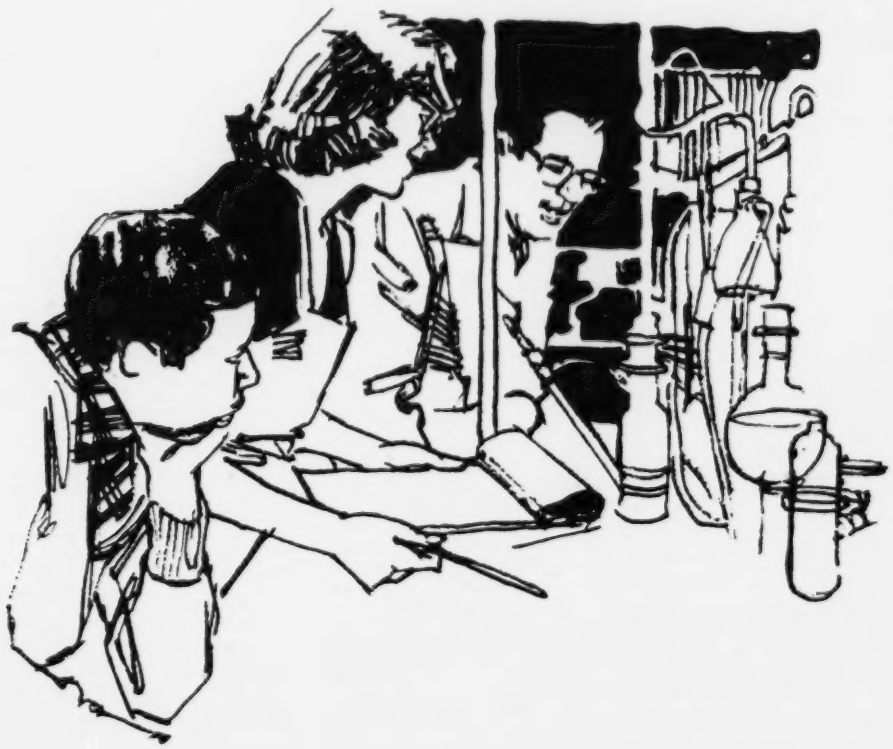
Educational rhetoric portrays two waves of reform. The first wave took place from approximately 1982 to 1986 and concentrated on establishing minimum competency standards for students and teachers. The second wave, beginning about 1986, moves beyond the setting of standards to improving the quality of teaching and learning at the school site. This second wave, with its shift in focus, has been labelled the "restructuring movement." Advocates of school restructuring call for reorganized instruction so that students truly understand the material presented to them, experience more in-depth learning as opposed to covering great amount of content, and engage in higher-order thinking. Restructuring also affects school governance. Restructured schools are usually characterized by school-site autonomy, shared decision-making among school staff, enhanced roles for teachers and parents, and regulatory simplicity.[1]

Some second-wave reform elements were finding their way into a number of district-level experiments. They also were incorporated into several state programs that provided planning and implementation grants to schools and/or districts (David 1989; Elmore 1988).

Despite these inroads, however, states continued to enact policies more characteristic of the first wave of reform. There was no clear shift to a second wave agenda in practice. For example, Florida tightened teacher certification requirements again in 1988— clearly a first-wave initiative. That same year, Pennsylvania began to develop a state-wide high school testing program. Minnesota, whose 1985 and 1987 choice programs made it a pioneer in the implementation of second-wave elements, instituted a basic skills examination for teachers in 1987. In other words, it appears that the reform movement was being driven by a broad set of policy recommendations that reflected state needs at a particular time. State level activity was not characterized by a set of successive waves and marked changes in direction.

5. Expansion of the economy, although crucial to reform, was not the complete cause of it.

Nationally, the period from 1981 through 1984 was one of rapid economic expansion. Most of the more aggressive reform states benefited from the financial upturn and committed more funds to education. Georgia's governor was able to mount a major reform effort while pledging not to raise taxes. Business interests in both Georgia and Florida lobbied hard for educational reform, in part because they knew that new costs would be minimal. But economic factors do not explain why reform occurred in some states and not in others. It is no surprise that some states with weak economies did not participate. Yet, a substantial number— including Arkansas, South Carolina, Tennessee, Texas, and West Virginia— did initiate reform programs, even though doing so required raising funds for education over and above the inflation rate.



[1]Key studies and reports recommending restructuring reforms are Theodore Sizer, *Horace's Compromise. The Dilemma of the American High School* (Boston: Houghton Mifflin, 1984), Carnegie Forum on Education and the Economy, *A Nation Prepared* (New York: Author, 1986), and National Governors' Association, *A Time for Results* (Washington, DC: Author, 1986).

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District Actions in Response to State Initiatives

As might be expected, school districts responded to the state reforms in various ways. Nevertheless, three conclusions about district activity appear warranted.

1. There was very little resistance to reforms that involved increasing academic content. In fact, some district requirements exceeded state requirements.

There was very little organized resistance to the most recent round of reforms, especially those having to do with toughening the curricula. Many districts actually welcomed the changes. There were a number of reasons for this. First, in many cases, the reforms legitimized existing practices. That is, in several states district requirements already met or exceeded those newly enacted by the state. Second, implementing the reforms was not difficult. Teachers and administrators knew what had to be done to add new courses to the curriculum. And finally, there was widespread support for the changes, particularly from parents and community leaders. This made the reforms introduced in the 1980s different from the more politically unpopular redistributive changes of the 1960s (Fuhrman, Clune and Elmore 1988; Clune 1989).

2. Much of the progress on the restructuring agenda resulted from district initiatives.

Several states, such as Washington, Arkansas, Maine, and Massachusetts, initiated programs to encourage school restructuring. However, state involvement in the restructuring movement usually took the form of seed money for local experimentation. Most of the creative development was being done by school districts. Early pioneer districts such as Rochester, New York; Miami, Florida; and Cincinnati, Ohio were joined by others like Santa Fe, New Mexico. Some smaller districts were also experimenting with restructuring strategies, but without the same level of publicity. The most commonly implemented elements of the restructuring movement in these districts were school-based management, usually with teachers having a strong voice in school affairs; shared decision-making at the district level; and sometimes innovative inservice practices. Where such experiments were taking place, there was a particularly cooperative relationship between district administrators and the local teachers' association (David 1989).

3. Some districts were actively using state policies to promote local priorities.

Past research on the implementation of reforms has shown that state policies typically result in mutual accommodation between those at the state and local level. CPRE researchers found this pattern in districts under study. But they also saw a pattern sometimes referred to as "see you and raise you five," where districts exceeded state requirements. These districts often responded to state requirements in ways that met their own objectives. One large urban district used state teacher policies to support its hiring of a large number of new teachers. Another district was using state policies to fight teacher attrition. Two districts in another state were using a merit schools program to promote school-based management. One of these districts was even putting additional money into the program. In some cases, districts had already begun aligning curriculum frameworks, tests, and texts before the state took action. The new state policies gave them the opportunity to show their "vision" (Fuhrman, Clune and Elmore 1988).

Looking to the Future of Reform

CPRE's research indicates that states have met with only modest success in achieving the educational goals expressed in *A Nation at Risk*. It is true that high school curricula are more academically oriented, standards for entering the teaching profession are more selective, teacher's salaries are higher, and state and local governments have boosted educational funding.

But there are still doubts about the rigor and challenge of some of the new courses in academic subjects, the impact of reform on at-risk students, the quality of teachers and teaching, and the equitable funding of schools. Adequate indicators to correctly measure the seriousness of many these concerns do not exist. Furthermore, several of the most highly touted reform proposals, such as career ladders programs, have not been widely adopted.

These outcomes do not warrant despair. School reforms can require many years of consistent effort before they pay off. Furthermore, the renewed public commitment to education evidenced in the reform movement improves morale, lends support to experimentation, and undergirds the efforts of everyone involved in the educational enterprise, including students and parents.

The reform policies of the 1980s represent first steps in a long-term improvement process. In that spirit, and in recognition that educational reform in this nation has been marked by too many shifts in direction, the following recommendations are presented:

No More New Waves

There is only one reform agenda: improving teaching and learning for all. Debate continues over the appropriateness of Wave 1 reforms like graduation requirements and student testing that stress regulation, standardization and top-down control and Wave 2 reforms like restructuring strategies that emphasize variation, empowerment and bottom-up decision making. Both strategies—state standard setting and local creativity— have their place. The focus should not be to jump from one approach to another but to find the best mix of the two.

A goal of improving teaching and learning for all implies the need to move on several fronts at once. In particular, much more work is needed in strengthening the curriculum. Strategies must be developed for providing better teacher education and staff development programs and for improving instruction and academic content. Such improvements require both standards—such as mandated assessment of high-level content— and efforts to devolve more decisions to the school community.

Match Policies to Problems

Too often, policy solutions are not well-suited to policy problems. CPRE's examination of state reforms suggests that some problems require several approaches or combinations of approaches. In the 1980s reforms, policymakers raised graduation requirements to get high schools to concentrate on more academic instruction.

But graduation standards are a blunt instrument. Although they can lead students to take more academic courses, in the absence of other strategies such as upgraded curriculum frameworks and staff development, they are not likely to produce desired goals. Similarly, policymakers have waived some regulations for schools experimenting with school-based management. However, districts and schools need access to models of successful schooling, technical assistance, and staff development to help personnel assume new roles and responsibilities within experimental programs. Without this assistance, waiver offers are not likely to generate much interest (Fuhrman 1989).

Another potential pitfall for policymakers is assuming that a particular policy response is the answer for all students when different mixes are optimal for different types of pupils. For example, students at the top two-thirds of the achievement band generally benefit from curricular intensification. More rigorous content enhances these student's academic achievement. However, lower achievers may need strategies beyond curricular intensification. Policies that allow parents greater choices among schools and strategies that promote greater links between schools and potential employers might help these children. Analysts and policymakers also urge prompt attention to the entire range of school and social services for children and an overall attack on out-of-school influences that inhibit learning.

Coordinate Reform Policies

For states to attack the problems of schools simultaneously from several fronts, their policies must send coherent signals to local educators and boards. Combinations of policy approaches hold particular promise for future reform. Some scholars have suggested that higher curriculum standards be incorporated into school restructuring efforts (Smith and O'Day 1989). Under such a plan, the state would provide a broad but explicit curriculum framework to guide teachers in presenting content. Careful alignment of the content in state curric-

Changes in Student Coursetaking in the 1980s

Across the nation, the most popular reform of the 1980s was increased graduation requirements. Forty-five states increased the total number of credits needed to graduate, 42 states added requirements in math, science or both. But local districts and schools varied greatly in their response to the new requirements. The requirements themselves were quite general (eg: "mathematics" rather than "algebra") and could be satisfied with various levels of the same course, such as remedial, general or academic. Several reports published by CPRE examine changes in student coursetaking in the 1980s.

There were strong gains nationally in the percentage of students taking college prep math and science courses between 1982 and 1987, according to *Coursetaking Patterns in the 1980s*. Author Margaret E. Goertz found that the increases were significant across racial, gender or ethnic background. But when students were grouped by academic track— such as academic or vocational— it appears that gains were concentrated among students in the academic track.

Furthermore, notes Goertz, most of the gains in students taking advanced math and science classes occurred too early to have been caused by recent increases in statewide high school graduation requirements. Since most the increases in advanced math and science coursetaking occurred among academic track students, the students may have been responding to stiffer entrance requirements that colleges and universities were beginning to impose in the early 1980s.

The schools most affected by new state requirements were those with a significant number of low and middle achieving students, according to *The Implementation and Effects of High School Graduation Requirements*. Author William Clune (with assistance from Paula White and Janice Patterson) discusses research conducted by CPRE on 19 high schools in four states (Arizona, California, Florida and Pennsylvania) with increased graduation requirements. In 17 schools, respondents reported additions of courses or sections in math. In 16 schools, respondents said there were additions in science. In the schools affected by the new requirements— usually those with a significant number of low and middle achievers— about 27 percent of students were taking an extra math course and 34 percent an extra science course. But the courses added were overwhelmingly at the basic, general or remedial level.

Across the nation, states increased coursework requirements usually by one or two units. But the Florida legislature enacted a bill that set a minimum of 24 credits for graduation beginning with the class of 1986-87. Prior to 1983, Florida had no state minimum and districts set their own requirements ranging from 17 to 22 credits across the state.

Curricular Change in Dade County, 1982-83 to 1986-87 analyzes data from 16 randomly chosen high schools in Dade County, Florida. Author Thomas Hanson reports that while overall math enrollments showed little change, students were redistributed toward less academically oriented math courses. There were large increases in enrollments in basic skills, general math 1 and informal geometry courses. Overall science enrollments increased dramatically in Dade County during the four-year period. Increases in physical science, ecology, chemistry 1 and marine biology courses account for 75 percent of the total science enrollment increase

ulum frameworks, tests, texts and accreditation standards would assure additional coherence. State funded, in-depth staff development and preservice programs would provide even more reinforcement.

Restructured schools could allow teachers to design and implement pedagogical strategies that comply with state curriculum frameworks and student standards, but are also appropriate for the local contexts. Teachers could use strategies such as peer and cross-age tutoring, cooperative learning, and new student configurations.

Another combination, suggested by the National Governors' Association (NGA), and discussed at the 1989 Education Summit, would join restructuring with performance accountability. In this arrangement, states and the federal government would reduce some of their cumbersome rules and regulations and give schools more decision-making authority. In return for their greater autonomy, schools would agree to regularly evaluate and report their performance. Continued deregulation would depend on the schools making satisfactory progress on performance indicators. The scheme can be taken one step further by recognizing outstanding school performance with cash rewards. The NGA proposal is especially compatible with choice strategies.

The most effective combinations will vary from state to state. But whatever the combination, it will need much more attention to coherence among its various pieces than has been the case to date— no small feat given the current fragmentation and bureaucracy in educational governance. For example, curriculum intensification can take place only if policymakers and educators at elementary, secondary and post-secondary levels cooperate.

Furthermore, subject matter preparation of prospective teachers needs to be coordinated with state curriculum frameworks, otherwise teacher preservice is a jumble of credits and courses. Similarly, staff development— offered by states, regional agencies, districts, teacher organizations or universities— must be coordinated with curriculum revisions and new roles and responsibilities. This is especially true when both school restructuring and curriculum intensification are pursued simultaneously.

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Curriculum and Student Standards

Changes in School Mathematics: Curricular Changes, Instructional Changes and Indicators of Change

by Thomas A. Romberg

September 1988. 43 pp. (No. RR-007) $4

Discusses how the mathematics curriculum should be changed to reflect changes in the nation's economic and social culture brought on by new technology. The report also outlines the National Council of Teachers of Mathematics (NCTM) proposal for new curriculum and evaluation standards.

Course-taking Patterns in the 1980's

By Margaret E. Goertz

September 1989. 66 pp. (No. RR-013) $7.

Uses data on eleventh grade students from the 1983-84 National Assessment of Progress (NAEP) as a baseline for examining the effects of changing state policies on student course-taking and on the relationship between course-taking and student characteristics.

Curricular Change in Dade County 1982-83 to 1986-87: A Replication of the PACE Study

by Thomas L. Hanson

September 1989. 120 pp. (No. RR-014) $7.

Investigates curricular change in Dade County, Florida during a period when high school academic standards were raised. In addition to describing changes that occurred generally, the study also examines differences in changes (or stability) by school socioeconomic level.

The Implementation and Effects Of High School Graduation Requirements: First Steps Toward Curricular Reform

by William H. Clune

(with Paula White and Janice Patterson)

February 1989. 77 pp. (No. RR-012) $5.

Discusses district and school responses to increases in statewide high school course requirements. The report is based on research conducted by CPRE in six states— Arizona, California, Florida, Georgia, Minnesota and Pennsylvania.

Increasing Educational Productivity Through Improving the Science Curriculum

by Senta A. Raizen

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The Evolution of the Reform Movement

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